



DATE: April 14, 1992

TO: District Engineers
District Field/Construction Engineers
Resident/Project Engineers
District Resource Specialists

FROM: Gerald D. Dobie
Engineer of Construction

SUBJECT: **CONSTRUCTION INSTRUCTIONAL MEMORANDUM 1992-7**
Bridge Painting

1. **Profile**

The specifications are being revised to provide a 10 percent increase in the maximum profile to 2.8 mils, regardless of the approved abrasives used. In order to reduce possible pin point rusting and to reduce any cohesion failures between coats, we are also reducing the maximum time between coats to 21 calendar days. Project engineers may approve this profile change on existing contracts ONLY with the reduced time between coats. To help stay within profile when using recycled grit, the contractor should add new grit frequently and, if/when large amounts of new grit are added, the blasting pressure should be temporarily reduced. When the profile is out of specification, the contractor should be required to modify his operation and reblast the area to bring it into compliance.

2. **Primer Thickness**

A general rule for frequency of dry film thickness (DFT) measurements is to make five separate spot measurements randomly spaced over each 100 square feet of coated surface. Each spot measurement consists of the average of three readings taken within one to three inches of each other after discarding any unusually high or low readings that cannot be repeated. The average of the five spot measurements for each 100 square feet shall not be less than the specified DFT. No one spot measurement shall be less than 80 percent of the specified DFT. Be sure to include spot measurements on the hard-to-reach areas as they are more apt to be insufficient DFT. Areas of insufficient DFT should be repaired as soon as possible to enhance the adhesion of the new coat to the old coat. Some locations will require more than this minimum amount of measurements.

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3. **Environmental**

Absolute compliance by the contractor with environmental regulations and specifications is required. During FHWA and Construction staff visits some incidents of contractor noncompliance were noted last summer.

4. **Mandatory Testing**

All MDOT inspectors assigned to bridge painting projects shall, as a minimum, have an initial background lead level blood test before the job begins and an additional test after the end of the construction season or job. All inspectors shall wear respirators when inside enclosures or when exposed to dust containing lead. Pulmonary function tests are required before individuals can wear respirators. Lead level blood testing and respiratory use was not previously mandatory. See CIM 1991-11 Bridge Painting - Mates Articles for more information.

Engineer of Construction

GDD:PAL:jd

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